

Amendments to the claims are as follows:

1. (Currently Amended) A CPP giant magnetoresistive head comprising:

lower and upper shield layers with a predetermined shield distance therebetween; and

a giant magnetoresistive element disposed between the upper and lower shield layers and comprising a pinned magnetic layer, a free magnetic layer and a nonmagnetic layer disposed between the pinned magnetic layer and the free magnetic layer, a current flowing perpendicularly to athe film plane of the giant magnetoresistive element,

wherein the pinned magnetic layer extends to athe rear of the nonmagnetic layer and the free magnetic layer in athe height direction, and athe dimension of the pinned magnetic layer in athe height direction is larger than that in athe track width direction.

2. (Currently Amended) The CPP giant magnetoresistive head according to claim 1, wherein the pinned magnetic layer comprises a magnetic material having a positive magnetostriction constant or a magnetic material having high coercive force, and anthe end of the pinned magnetic layer exposed at a surface facing a recording medium.

3. (Original) The CPP giant magnetoresistive head according to claim 1, wherein the pinned magnetic layer has a laminated ferrimagnetic structure comprising a first pinned magnetic layer and a second pinned magnetic layer which are laminated with a nonmagnetic intermediate layer disposed therebetween, and the pinned magnetic layer partially or entirely comprises Fe-Co-Cu (wherein Fe > 10 atomic percent, Co > 30 atomic percent, and Cu > 5 atomic percent), Fe-Co-Cu-X (wherein X is at least one element of Pt, Pd, Mn, Si, Au, and Ag), or Co₂MnY (wherein Y is at least one element of Ge, Si, Sn, and Al).

4. (Currently Amended) The CPP giant magnetoresistive head according to claim 1, further comprising an antiferromagnetic layer provided in ~~at~~ the rear of the giant magnetoresistive element in the height direction, for pinning the magnetization direction of the pinned magnetic layer in the height direction.

5. (Original) The CPP giant magnetoresistive head according to claim 4, wherein the antiferromagnetic layer is an insulating antiferromagnetic layer comprising Ni-O or α -Fe₂O₃,

6. (Original) The CPP giant magnetoresistive head according to claim 4, wherein the antiferromagnetic layer comprises an insulating antiferromagnetic comprising Ni-O or α -Fe₂O₃ and an antiferromagnetic metal layer interposed between the insulating antiferromagnetic layer and the pinned magnetic layer.

7. (Original) The CPP giant magnetoresistive head according to claim 1, further comprising large-area nonmagnetic metal films provided between the giant magnetoresistive element and the lower shield layer and between the giant magnetoresistive element and the upper shield layer, respectively, so that the large-area nonmagnetic metal films are in direct contact with the pinned magnetic layer and the free magnetic layer and have larger areas than those of the pinned magnetic layer and the free magnetic layer, respectively.

8. (Original) The CPP giant magnetoresistive head according to claim 7, wherein the large-area nonmagnetic metal film disposed between the giant magnetoresistive element and the lower shield layer comprises any one of Ta/Cu, Ta/Ru/Cu, Ta/Cr, Ta/Ni-Cr, Ta/(Ni-Fe)-Cr, and Cr, and when the composition contains Cr, the Cr content exceeds 20 atomic percent.

9. (Currently Amended) A CPP giant magnetoresistive head comprising;

lower and upper shield layers with a predetermined shield distance therebetween; and

a giant magnetoresistive element disposed between the upper and lower shield layers and comprising a pinned magnetic layer, a free magnetic layer and a nonmagnetic layer disposed between the pinned magnetic layer and the free magnetic layer, a current flowing perpendicularly to athe film plane of the giant magnetoresistive element;

wherein the pinned magnetic layer comprises a magnetic material having a positive magnetostriction constant or a magnetic material having high coercive force, and anthe end of the pinned magnetic layer is exposed at a surface facing a recording medium.

10. (Currently Amended) The CPP giant magnetoresistive head according to claim 9, wherein athe dimension of the pinned magnetic layer in athe height direction is larger than the dimension in athe track width direction.

11. (Original) The CPP giant magnetoresistive head according to claim 9, wherein the pinned magnetic layer has a laminated ferrimagnetic structure comprising a first pinned magnetic layer and a second pinned magnetic layer which are laminated with a nonmagnetic intermediate layer disposed therebetween, and the pinned magnetic layer partially or entirely comprises Fe-Co-Cu (wherein Fe > 10 atomic percent, Co > 30 atomic percent, and Cu > 5 atomic percent), Fe-Co-Cu-X (wherein X is at least one element of Pt, Pd, Mn, Si, Au, and Ag), or Co₂MnY (wherein Y is at least one element of Ge, Si, Sn, and Al).

12. (Currently Amended) The CPP giant magnetoresistive head according to claim 9, further comprising an antiferromagnetic layer provided in ~~at~~ the rear of the giant magnetoresistive element in the height direction, for pinning the magnetization direction of the pinned magnetic layer in the height direction.

13. (Original) The CPP giant magnetoresistive head according to claim 12, wherein the antiferromagnetic layer is an insulating antiferromagnetic layer comprising Ni-O or α -Fe₂O₃.

14. (Original) The CPP giant magnetoresistive head according to claim 12, wherein the antiferromagnetic layer comprises an insulating antiferromagnetic comprising Ni-O or α -Fe₂O₃ and an antiferromagnetic metal layer interposed between the insulating antiferromagnetic layer and the pinned magnetic layer.

15. (Original) The CPP giant magnetoresistive head according to claim 9, further comprising large-area nonmagnetic metal films provided between the giant magnetoresistive element and the lower shield layer and between the giant magnetoresistive element and the upper shield layer, respectively, so that the large-area nonmagnetic metal films are in direct contact with the pinned magnetic layer and the free magnetic layer and have larger areas than those of the pinned magnetic layer and the free magnetic layer, respectively.

16. (Original) The CPP giant magnetoresistive head according to claim 15, wherein the large-area nonmagnetic metal film disposed between the giant magnetoresistive element and the lower shield layer comprises any

one of Ta/Cu, Ta/Ru/Cu, Ta/Cr, Ta/Ni-Cr, Ta/(Ni-Fe)-Cr, and Cr, and when the composition contains Cr, the Cr content exceeds 20 atomic percent.